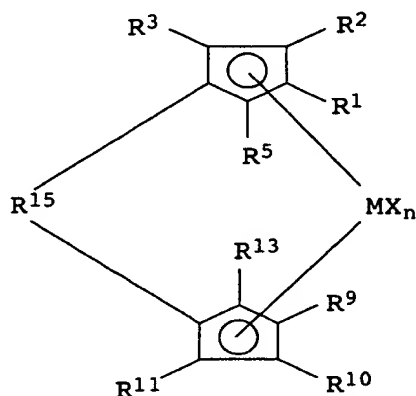


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We claim:

1. A process for producing injection stretch blow molded  
 5 containers from olefin polymers by injection molding parisons  
 at melt temperatures of from 200 to 280°C and then stretch  
 blow molding the parisons at from 100 to 160°C, which  
 comprises stretch blow molding olefin polymers comprising at  
 least 40% by weight, based on the olefin polymers, of  
 10 homopolymers of propylene or copolymers of propylene with  
 other C<sub>2</sub>-C<sub>10</sub> 1-alkenes, which are obtained by polymerizing the  
 appropriate monomers with metallocene catalysts comprising,  
 as active constituents,  
 15 A) one or more metallocene complexes of the general formula  
 (Ic)



(Ic)

where:

M is titanium, zirconium, hafnium, vanadium,  
 niobium or tantalum, or else elements of the 3rd  
 subgroup of the Periodic Table or of the  
 35 lanthanoids,

X is fluorine, chlorine, bromine, iodine,  
 hydrogen, C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>6</sub>-C<sub>15</sub>-aryl, alkylaryl  
 having from 1 to 10 carbon atoms in the alkyl  
 40 radical and from 6 to 20 carbon atoms in the  
 aryl radical, -OR<sup>6</sup> or -NR<sup>6</sup>R<sup>7</sup>,

n is 1, 2 or 3, where n is the valence of M minus  
 the number 2,

where

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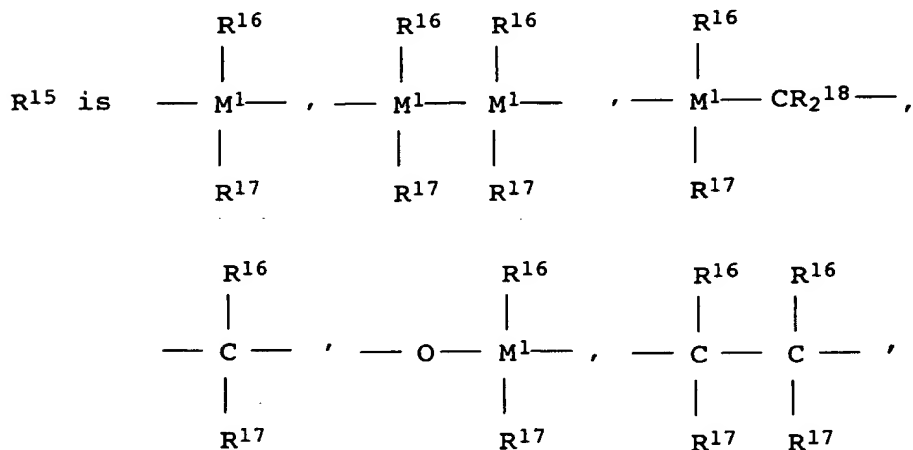
## 22

$R^6$  and  $R^7$  are  $C_1$ - $C_{10}$ -alkyl,  $C_6$ - $C_{15}$ -aryl, alkylaryl, aryl-alkyl, fluoroalkyl or fluoroaryl having in each case from 1 to 10 carbon atoms in the alkyl radical and from 6 to 20 carbon atoms in the aryl radical, and

the radicals X are identical or different,

$R^1$  to  $R^3$ ,  $R^5$ ,  $R^9$  to  $R^{11}$  and  $R^{13}$  are hydrogen,  $C_1$ - $C_{10}$ -alkyl, 5- to 7-membered cycloalkyl, which in turn may be  $C_1$ - $C_{10}$ -alkyl-substituted,  $C_6$ - $C_{15}$ -aryl or arylalkyl, where two adjacent radicals together may also be saturated or unsaturated cyclic groups having from 4 to 15 carbon atoms, or  $Si(R^8)_3$ , where

$R^8$  may be  $C_1$ - $C_{10}$ -alkyl,  $C_3$ - $C_{10}$ -cycloalkyl or  $C_6$ - $C_{15}$ -aryl, and



$= BR^{16}$ ,  $= AlR^{16}$ ,  $-Ge-$ ,  $-Sn-$ ,  $-O-$ ,  $-S-$ ,  $= SO$ ,  $= SO_2$ ,  
 $= NR^{16}$ ,  $= CO$ ,  $= PR^{16}$  or  $= P(O)R^{16}$ ,

where

each of  $R^{16}$ ,  $R^{17}$  and  $R^{18}$  is identical or different and is hydrogen, halogen,  $C_1$ - $C_{10}$ -alkyl,  $C_1$ - $C_{10}$ -fluoroalkyl,  $C_6$ - $C_{10}$ -fluoroaryl,  $C_6$ - $C_{10}$ -aryl,  $C_1$ - $C_{10}$ -alkoxy,  $C_2$ - $C_{10}$ -alkenyl,  $C_7$ - $C_{40}$ -arylalkyl,  $C_8$ - $C_{40}$ -arylalkenyl or  $C_7$ - $C_{40}$ -alkylaryl, or where two adjacent radicals, in each case with the atoms linking them, form a saturated or unsaturated ring having from 4 to 15 carbon atoms, and

M<sup>1</sup> is silicon, germanium or tin,

and two adjacent radicals R<sup>2</sup> and R<sup>3</sup> and two adjacent radicals R<sup>10</sup> and R<sup>11</sup> are in each case together a ring having from 4 to 15 carbon atoms,

and

B) one or more metallocenium-ion-forming compounds.

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2. A process for producing injection stretch blow molded containers as claimed in claim 1, where the olefin polymers are homopolymers of propylene or copolymers of propylene with other C<sub>2</sub>-C<sub>10</sub> 1-alkenes, obtainable by polymerizing the appropriate monomers with metallocene catalysts.

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3. A process for producing injection stretch blow molded containers as claimed in claim 1 ~~or 2~~, where the homopolymers of propylene or copolymers of propylene with other C<sub>2</sub>-C<sub>10</sub> 1-alkenes, obtainable using metallocene catalysts, have a melting point of from -120 to 165°C.

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4. A process for producing injection stretch blow molded containers as claimed in claims 1 ~~to 3~~, where the homopolymers of propylene or copolymers of propylene with other C<sub>2</sub>-C<sub>10</sub> 1-alkenes, obtainable using metallocene catalysts, have a melt flow rate MFR of from 2 to 50 g/10 min at 230°C with a load of 2.16 kg.

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5. A process for producing injection stretch blow molded containers as claimed in <sup>claim 1</sup> ~~any of claims 1 to 4~~, where the olefin polymers comprise up to 5% by weight, based on the olefin polymers, of nucleating agents as a further component.

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6. An injection stretch blow molded container as claimed in <sup>claim 1</sup> ~~any of claims 1 to 5~~, where the metallocene complex (Ic) is dimethylsilanedilybis[3,3'-(2-methylbenzindenyl)]zirconium dichloride.

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Injection stretch blow molded containers made from olefin polymers

## 5 Abstract

Injection stretch blow molded containers are obtainable from olefin polymers, comprising homopolymers of propylene or copolymers of propylene with other C<sub>2</sub>-C<sub>10</sub>-alk-1-enes, which are  
10 obtainable by polymerizing the corresponding monomers with metallocene catalysts.

Processes for producing injection stretch blow molded containers from olefin polymers, and also the use of olefin polymers for  
15 producing injection stretch blow molded containers, are described.

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